CLAIMS

What is claimed is:

1. A method for generating validation logic executable in a target application in a target platform, comprising:
   creating a metarule; and
   creating target domain metarule validation logic based on the metarule and a target language of the target platform.

2. The method of claim 1, wherein the metarule is one of required validation, length validation, data type validation, range validation, enumeration validation, regular expression validation, cross-attribute, aggregation, and conditional.

3. The method of claim 1, wherein the metarule includes data.

4. The method of claim 1, wherein the metarule includes logic.

5. The method of claim 1, wherein the metarule includes an error message.

6. The method of claim 1, wherein the target platform is one of ASCII files, C, C#, C++, COBOL, Java, Javascript, RDBMS, Visual Basic, and XML.

7. The method of claim 1, wherein the metarule is imported from an external system.

8. The method of claim 1, wherein the metarule is exported to an external system.

9. The method of claim 1, further comprising:
   submitting test data, including a data value, to the target domain metarule validation logic; and

producing an actual validation result based on the submitted test data.

10. The method of claim 9, further comprising:

submitting an expected result; and

comparing the actual validation result with the expected result.

11. The method of claim 1, further comprising:

outputting the metarule in a text-readable format.

12. The method of claim 1, wherein the target domain metarule validation logic is generated for the metarule and contains logic to carry out the metarule.

13. The method of claim 1, wherein the target domain metarule validation logic is represented as a metarule validation function that receives a data value as input and outputs a violation detected.

14. The method of claim 1, further comprising:

integrating the target domain metarule validation logic with the target application.

15. A method for generating validation logic executable in a target application in a target platform, comprising:

creating a metarule;

creating a target domain attribute;

creating a mapping of the metarule to the target domain attribute; and

creating target domain attribute validation logic executable in a target application in a target platform based on the metarule, the mapping of the metarule to the target domain attribute, and the target language of the target platform.

16. The method of claim 15, wherein the target domain attribute has one of a name, data type, and description.

17. The method of claim 15, wherein the target domain attribute represents one of a) a variable in one of a C, C++, C#, Java, and Visual Basic application; b) one of an object property and variable in a Javascript application; c) a data item in a COBOL application; d) a field in an ASCII File; e) a column in a relational database; and f) one of an element and an attribute in an XML file.

18. The method of claim 15, wherein the target domain attribute is input by a user.

19. The method of claim 15, wherein the target domain attribute is imported from the target application.

20. The method of claim 15, wherein the target domain attribute is imported from an external system.

21. The method of claim 15, wherein the target domain attribute is exported to an external system.

22. The method of claim 15, further comprising:

submitting test data, including a value of a target domain attribute, to the target domain attribute validation logic; and

producing an actual validation result based on the submitted test data.

23. The method of claim 22, further comprising:

submitting an expected result; and

comparing the actual validation result with an expected result.

24. The method of claim 15, further comprising:

outputting the target domain attribute and the mapped metarule in a text-readable format.

25. The method of claim 15, wherein the target domain attribute validation logic is generated for the target domain attribute and contains logic to validate the target domain attribute.

26. The method of claim 15, wherein the target domain attribute validation logic is in the form of a function and receives as input one of the target domain attribute and a value of the target domain attribute and outputs a violation.

27. The method of claim 15, further comprising:

integrating the target domain attribute validation logic with the target application.

28. The method of claim 15, wherein the metarule is associated with two or more target domain attributes.

29. The method of claim 15, wherein the target domain attribute is associated with two or more metarules.

30. The method of claim 15, further comprising:

creating a target domain entity from one or more target domain attributes; and

creating target domain entity validation logic executable in a target application in a target platform that validates the one or more target domain attributes in the target domain entity based on the target domain attributes contained in the target domain entity, the target domain attribute validation logic corresponding to the one or more target domain attributes, and the target language of the target platform.

31. The method of claim 30, wherein the target domain entity has one of a name and description.

32. The method of claim 30, wherein the target domain entity is one of a Java class, C struct, C++ class, C# class, Visual Basic class, Javascript object, RDBMS table, COBOL data set, ASCII record, and XML element.

33. The method of claim 30, wherein the target domain entity is input by a user.

34. The method of claim 30, wherein the target domain entity is imported from the target application.

35. The method of claim 30, wherein the target domain entity is imported from an external system.

36. The method of claim 30, wherein the target domain entity is exported to an external system.

37. The method of claim 30, further comprising:

submitting test data, including values for the target domain attributes contained in the target domain entity, to the target domain entity validation logic; and

producing an actual validation result based on the submitted test data.

38. The method of claim 37, further comprising:

submitting an expected result; and

comparing the actual validation result with the expected result.

39. The method of claim 30, further comprising:

outputting the target domain entity and its associated target domain attributes in a text-readable format.

40. The method of claim 30, wherein the target domain entity validation logic is generated for the target domain entity and contains logic to validate the target domain entity.

41. The method of claim 30, wherein the target domain entity validation logic is in the form of a function and receives an instance of a target domain entity as input and outputs a violation.

42. The method of claim 30, further comprising:

integrating the target domain entity validation logic with the target application.

43. The method of claim 30, wherein the target domain entity is referenced by a target domain attribute belonging to another target domain entity.

44. The method of claim 30, further comprising:

creating a target domain from one or more target domain entities.

45. The method of claim 44, wherein the target domain is imported from an external system.

46. The method of claim 44, wherein the target domain is exported to an external system.

47. The method of claim 44, further comprising:

outputting the target domain and its associated target domain entities in a text-readable format.

48. A method for generating validation logic executable in a target application in a target platform, comprising:

creating a metarule;

creating a meta domain attribute;

associating the metarule with the meta domain attribute;

creating a target domain attribute;

mapping the meta domain attribute to the target domain attribute; and

creating target domain attribute validation logic executable in a target application in a target platform based on the metarule, the meta domain attribute, the target domain attribute, the mapping between the meta domain attribute and the target domain attribute, the metarule associated with the meta domain attribute, and the target language of the target platform.

49. The method of claim 48, wherein the meta domain attribute has one of a name, data type, and description.

50. The method of claim 48, wherein the meta domain attribute is input by a user.

51. The method of claim 48, wherein the meta domain attribute is imported from an external system.

52. The method of claim 48, wherein the meta domain attribute is exported to an external system.

53. The method of claim 48, further comprising:

submitting test data, including a value of a meta domain attribute, to the target domain attribute validation logic; and

producing an actual validation result based on the submitted test data.

54. The method of claim 53, further comprising:

submitting an expected result; and

comparing the actual validation result with the expected result.

55. The method of claim 48, further comprising:

outputting the meta domain attribute and the associated metarule in a text-readable format.

56. The method of claim 48, wherein the metarule is associated with two or more meta domain attributes.

57. The method of claim 48, wherein the meta domain attribute is associated with two or more metarules.

58. The method of claim 48, further comprising:

creating a meta domain entity from at least one meta domain attribute.

59. The method of claim 58, wherein the meta domain entity has one of a name and a description.

60. The method of claim 58, wherein the meta domain entity is input by a user.

61. The method of claim 58, wherein the meta domain entity is imported from an external system.

62. The method of claim 58, wherein the meta domain entity is exported to an external system.

63. The method of claim 58, further comprising:

submitting test data, including values for the meta domain attributes contained in the meta domain entity, to the target domain entity validation logic; and

producing an actual validation result based on the submitted test data.

64. The method of claim 63, further comprising:

submitting an expected result; and

comparing the expected result to the actual validation result.

65. The method of claim 58, further comprising:

outputting the meta domain entity and its associated meta domain attributes in a text-readable format.

66. The method of claim 58, further comprising:

creating a meta domain from one or more meta domain entities.

67. The method of claim 66, wherein the meta domain is imported from an external system.

68. The method of claim 66, wherein the meta domain is exported to an external system.

69. The method of claim 66, further comprising:

outputting the meta domain and its associated meta domain entities in a text-readable format.

70. A method for generating validation logic executable in a target application in a target platform, comprising:

receiving a metarule; and

creating target domain metarule validation logic based on the metarule and a target language of the target platform.

71. A method for generating validation logic executable in a target application in a target platform, comprising:

receiving a metarule;

creating a target domain attribute;

creating a mapping of the metarule to the target domain attribute; and

creating target domain attribute validation logic executable in a target application in a target platform based on the metarule, the mapping of the metarule to the target domain attribute, and the target language of the target platform.

72. A method for generating validation logic executable in a target application in a target platform, comprising:

receiving a metarule;

receiving a meta domain attribute associated with the metarule;

creating a target domain attribute;

mapping the meta domain attribute to the target domain attribute; and

creating target domain attribute validation logic executable in a target application in a target platform based on the metarule, the meta domain attribute, the target domain attribute, the mapping between the meta domain attribute and the target domain attribute, the metarule associated with the meta domain attribute, and the target language of the target platform.

73. A method for generating validation logic executable in a target application in a target platform, comprising:

receiving a metarule;

creating a meta domain attribute;

associating the metarule with the meta domain attribute;

creating a target domain attribute;

mapping the meta domain attribute to the target domain attribute; and

creating target domain attribute validation logic executable in a target application in a target platform based on the metarule, the meta domain attribute, the target domain attribute, the mapping between the meta domain attribute and the target domain attribute, the metarule associated with the meta domain attribute, and the target language of the target platform.

74. Computer executable software code transmitted as an information signal, the code for generating rules executable in a target application in a target platform, comprising:

code for creating a meta domain attribute;

code for creating one or more metarules;

code for associating the one or more metarules with the meta domain attribute;

code for creating a target domain attribute;

code for mapping the meta domain attribute to the target domain attribute; and

code for creating a target domain attribute validation function based on the meta domain attribute, the target domain attribute, the mapping between the meta domain attribute and the target domain attribute, the one or more metarules associated with the meta domain attribute, and the target language of the target platform.

75. A programmed computer system including a program for generating rules executable in a target application in a target platform, comprising:

means for creating a meta domain attribute;

means for creating one or more metarules;

means for associating the one or more metarules with the meta domain attribute;

means for creating a target domain attribute;

means for mapping the meta domain attribute to the target domain attribute; and

means for creating a target domain attribute validation function based on the meta domain attribute, the target domain attribute, the mapping between the meta domain attribute and the target domain attribute, the one or more metarules associated with the meta domain attribute, and the target language of the target platform.

76. A system for generating rules executable in a target application in a target platform, comprising:

a meta domain editor for creating a meta domain attribute and an associated metarule;

a target domain editor for creating a target domain attribute and for mapping the meta domain attribute to the target domain attribute; and

a target domain attribute validation function generator for generating a target domain attribute validation function based on the meta domain attribute, the associated metarule, the target domain attribute, and the target language of the target platform.--